PUMA MISSION SUPPORT SYSTEM (MSS)
STATEMENT OF REQUIREMENT

Issue 3, 10 April 2015

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Appendices to Puma MSS Statement of Requirement

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Part 1 – Introduction

Introduction

1. This document provides the scope of work required as part of the Puma HC Mk2 Mission Support System (MSS).

2. The Single Statement of User Need (SSON) for the Puma HC2 MSS is:

> "The Puma HC2 fleet requires a MSS to support the ac until OSD, this encompasses a ground based Mission Planning System (MPS) and an in flight Mission Management System (MMS)."

3. For clarity the definitions of these systems are reproduced below:

   a. **Mission Support System (MSS).** Encompasses the planning, tasking, re-planning and re-tasking activities that are needed before, during and after-flight to adapt to changing strategic, operational or tactical goals. MSS encompasses Mission Planning Systems and Mission Management Systems.

   b. **Mission Planning System (MPS**). The elements of MSS which occur before flight. The tasking, planning, briefing and ultimately transfer of mission data into the air platform.

   c. **Mission Management System (MMS).** The elements of MSS which occur following the transfer of data into the air platform. They cover the re-planning and re-tasking elements required during flight and the ability to review data after-flight.

4. The Contractor shall supply a MSS in two delivery stages (as detailed within paragraphs 18 to 25 of this document) and shall support it from delivery (as provided for within this Statement of Requirement) through life until 31 March 2020 or, if the Authority exercises its option to extend the Contract in accordance with its terms, until platform out of Service Date (OSD) on 31 March 2025. The system requirements and through life support are defined within this Statement of Requirement.

Project Overview

5. Mission Support System (MSS) enables the aircrew to plan rapidly before or after they have departed on task, they allow rapid changes to missions/plans while airborne or at locations away from base such as austere Forward Arming and Refuelling Point (FARP) locations, thus further increasing operational tempo as the situation changes

6. The MSS will provide aircrew with the capability to import/export and merge mission files for complex deployed aviation operations (including with and other coalition partners) and will provide the following:

   a. Reduced planning time (proven by the introduction of the Attack Helicopter (AH) MPS and Rotary Wing Advanced Mission Planning Aid (RW AMPA)) and employment of MSS during operations s.26;

   b. Increased Situational Awareness (SA);

c. Improved threat and intelligence data exchange;

d. Route and timing de-confliction;

e. Reduced flight safety risk.

7. s.26.

8. The MSS project will provide an efficient planning tool while maximising interoperability with other planning systems. The Contractor will also provide a support package that will maintain operational effectiveness until 31 March 2020 or, if the Authority exercises its option to extend the Contract in accordance with its terms, through to Puma OSD of 31 March 2025.

9. The Main Operating Base (MOB) for Puma HC2 is RAF Benson in Oxfordshire.

Supporting Documents

10. The SRD refers to Defence Middleware. Middleware is software that acts as a bridge between an operating system or database and applications and will be used to provide data feeds to the MSS, e.g. mapping updates from AIDU, metrological data and Notices to Airmen. The hardware and software that will deliver this data to the MSS will be provided by the Authority, however the MSS Contractor shall ensure that the MSS solution is capable of importing data from Defence Middleware. The MSS Contractor shall ensure that their solution is compatible with Defence Middleware, for the purpose of this requirement. Appendices 2 to 8 to this Statement of Requirement are representative of the Defence Middleware Interface Control Documents for the Puma HC2 Mission Support System.

PART 2 – PROCUREMENT OF PUMA HC2 MISSION SUPPORT SYSTEM

11. The Contractor shall ensure the MSS is able to support Puma HC2 operations across the range of climatic and operating conditions stated in the System Requirements Document at Appendix 1 (SRD).

Mission Support System – Systems Requirement Document

12. The Contractor shall deliver an MSS which is compliant with the SRD (at the stated levels of compliance declared by the Contractor within Part 2 of the SRD). The structure of the SRD comprises of the following and the structure is explained within Part 1 of the SRD.

Part 1. General Description

Part 2. User & System Requirements. (See spreadsheet)

Part 3. Context Documents. (See spreadsheet)

Part 4. Glossary. (See spreadsheet)

Part 5. Acronyms. (See spreadsheet)

13. The SRD incorporates the User Requirements Document (entries highlighted in orange) which are included to provide context. The Contractor shall deliver an MSS which is compliant with the System Requirements in the SRD (at the stated levels of compliance declared by the Contractor within Part 2 of the SRD).

System Development

14. The Contractor shall provide a fully tested MSS solution which achieves aircraft Release to Service (RTS), including but not limited to:

a. Achieving Design Qualification (compliance with Def-Stan 00-970 and equivalent standards and the applicable MMA Regulatory Articles);
b. Provision of safety cases iaw Def-Stan 00-56 and the applicable MMA Regulatory Articles;
c. Conducting trials;
d. Provision of software licences;
e. Provision of technical publications;
f. Provision of training material and initial training for 22 aircraft crews;
g. The supply of MPS (MOB & Deployable) and MMS for the Puma HC2 fleet.

15. The Contractor shall produce the documentation required to deliver the MSS in accordance with the applicable Regulatory Articles (as referenced within the Contract).

16. If any modification activities occur and if they affect software or complex electronic hardware on the aircraft, the Contractor shall provide the software modification certification evidence for the Development Assurance Level (DAL) A, B and C systems affected.

17. The Contractor shall participate in a MSS Human Machine Interface (HMI) Working Group during system development and will ensure that HMI Working Group recommendations are incorporated into the system design where practicable.

Contractor Delivery Stages

18. The MSS delivery shall be in two phases, an IOC and FOC delivery under the following definitions:

a. Stage 1 is defined as the Contractor deliverables necessary to obtain an MSS IOC declaration.
b. Stage 2 is defined as the Contractor deliverables necessary between IOC and FOC to declare an MSS FOC.

19. The Authority will make Middleware available to the Contractor. Proving compatibility with middleware may take place via a factory trial with the Middleware supplier, which will be arranged by the Authority. This will be represented by a separate milestone. For the avoidance of doubt, the Contractor shall not be involved in any middleware development or maturation activity and the Contractor's involvement in any factory trial to prove System compatibility with middleware shall be on the basis that the middleware to be used has already been accepted by the Authority).

20. Compliance with JSP 604 (SLI capability) will also be represented by a separate milestone, which must be achieved before FOC can be declared.

21. The Contractor Stage 1 (IOC) delivery will be complete when the Contractor has delivered the following (as a working system):

s.26

22. The Contractor Stage 2 (FOC) delivery will be complete when the contractor has delivered the following (as a working system):

a. Updated Stage 2 Deliverables (as identified in Annex B)
b. Updated software FOC System Functionality (as defined in the SRD)
c. Additional s.26 Network Hardware
d. Compliance with JSP 604 (SLI capability).
e. The System shall have the appropriate clearances to connect to SLI and carry data up to and including s.26 classification.

23. In addition to Security, IT and Safety working groups a number of reviews are planned where the end user will be able to provide feedback prior to the Contractor Stage 1 delivery. These will include the:

a. Preliminary Design Review (PDR),
b. Software Working Group 1.
c. Critical Design Review (CDR).

24. A full demonstration of the System will be presented at the Stage 1 CDR and the end users will have time between IOC and FOC to evaluate the System and provide feedback.

25. Post Stage 1 delivery there are two further reviews planned. These will include

a. Software Working Group 2.
b. Stage 2 Critical Design Review.

Test & Evaluation

26. The standards referred to in the Contract Terms and Conditions (including Contract Annexes) shall apply.

27. Key elements of test and evaluation are summarised below, and should be read in conjunction with the proposed PDR and CDR entry and exit criteria in paragraph 36 of this document. Separate critical design reviews will carried out for the Stage 1 IOC and Stage 2 FOC phases (as identified in the table above). The required functionality of each Stage is defined in the SRDat Appendix 1 to Annex A.

28. The following table summarises the approach to Integrated Test and Evaluation. Changes in the approach may be agreed as part of the PDR/CDR process and will be formally recorded.

Attribute	Test & Evaluation	Key Responsibility for Assessment	Contribution to DLODS								Acceptance
			Training	Equipment	Personnel	Information	Concepts and Doctrine	Organisation	Infrastructure	Logistics	Interoperability	
Safety Case	MSS system safety case	MSS supplier		•			•					Delivery of a Preliminary MSS Safety Case at PDR. Delivery of an Interim MSS Safety Case at Stage 1 CDR. Delivery of a Final MSS Safety Case at Stage 1 (IOC) Design Certification (Handover). TAA acceptance of Final MSS safety case subject to delivery of an acceptable Safety Case and Design Certificate.
	Platform safety case	P2G & P2G Independent Safety Advisor		•			•					
HMI	Joint HMI Working Group (Contractor SWG)	Puma RM RWOETU		•	•							Acceptance via Stage 1 and Stage 2 CDR by MSS Project Manager
EMC	MSS supplier to provide 3rd party evidence for EMC compatibility iaw Def Stan 59-411	MSS supplier		•								Acceptance via Stage 1 CDR by MSS Project Manager
Software	The MSS supplier shall provide independent 3rd party evidence for the software development process and to demonstrate that there are processes in place to ensure that the MSS does	MSS supplier				•	•				•	IOC Acceptance by MSS Project Manager following successful Contractor Stage 1 CDR and delivery of Contractor Stage 1 IOC System Functionality. FOC acceptance by MSS Project Manager following successful Contractor Stage 2 CDR and delivery of Contractor Stage 2 FOC

	not cause corruption of data (e.g. use of cyclic redundancy codes) in accordance with DO178B. The MPS will write data to a PCMCIA card which is used to import waypoints into the CMA 9000 Flight Management System.											System Functionality, including compliance with JSP 604.
Hardware	MSS supplier to provide evidence for the hardware development process	MSS supplier		•								Standalone equipment Acceptance by MSS Project Manager following successful Contractor Stage 1 CDR and Contractor Stage 1 hardware delivery s.26 network equipment Acceptance by MSS Project Manager following successful Contractor Stage 2 CDR and Contractor Stage 2 s.26 network hardware delivery, including compliance with JSP 604.
Support Services	MSS supplier to provide evidence that Support services including: fault logging, fault resolution, monitoring, reporting, responding to technical queries, software updates, configuration control and the provision of spares and repairs will be developed and refined through the PDR and CDR processes.	Puma Ops	•	•	•	•	•			•	•	These tools and processes will be reviewed via the HMI/User Working Group and will be demonstrated during the MPS and MMS Stage 1 CDR. These services will be further assessed between IOC and FOC and if required updated before final FOC acceptance.
Publications	Assessment of Publications from a User perspective	Puma RM RWOETU	•			•	•					Acceptance by MSS Project Manager following the Contractor Stage 1 Delivery and prior to completion of Stage 1.

	Assessment of Publications from an Administrator/ Ops perspective	Puma Ops										
Training	Development of Training	MSS supplier	•		•			•				Acceptance by MSS Project Manager and RAF Benson Training Officer
	Delivery of Training	Puma RM RWOETU Puma Ops	•		•			•				Acceptance by MSS Project Manager following the Contractor Stage 1 training delivery and prior to completion of Stage 1. Updated training post Stage 2 CDR.
Compliance with MOD IT Policy	MSS supplier to provide evidence that system complies with MOD policy inc. JSP 604	MSS supplier	•	•	•	•	•	•	•		•	Acceptance via MSS Project Manager & ISS (Corsham) Standalone Acceptance at Contractor Stage 1. JSP 604 Acceptance at Contractor Stage 2.
Stowage on Aircraft	Risk and hazard analysis will be conducted by RWOETU and will incorporate the recommendations of the HMI working Group and any plans for cockpit integration (e.g. via a kneeboard or a form of stowage in the cockpit and cabin of the aircraft).	MSS supplier		•	•							Acceptance by MSS Project Manager supported by RWOETU and Puma Engineering
	Aircraft Modification	P2G		•	•							This is not a Contractor deliverable and any aircraft modification would be conducted as a Service Modification process.
Security	MSS supplier to provide RMADS	MSS supplier	•	•	•	•	•	•	•		•	Acceptance via Stage 1 and Stage 2 CDR by MSS Project Manager and DIA assuror
RTS Recommendations		P2G and MSS supplier	•	•	•	•	•	•	•	•	•	Acceptance by RTSA

Test & Evaluation: Evaluation

29. Planning using the desktop based Mission Planning System (MPS) will be trialled by RWOETU during the Contractor Stage 1 CDR. Between the Contractor Stage 1 delivery and the declaration of IOC, the MPS will be assessed (in parallel with existing planning systems/procedures) to ensure that the planning tool produces robust data before Flight is conducted.

30. When RWOETU have confidence in the data produced by the MPS, flight trials shall be conducted. Flight trials will be conducted by RWOETU utilising waypoints transferred from the MPS to the PCMCIA card for upload to the Flight Management System and route/moving map data on the Mission Management System (tablet).

31. Feedback from use of the MPS shall be provided during the Contractor SWG 2 so that it can be considered for incorporation into the Contractor Stage 2 release.

Test & Evaluation: Security and IT

32. The MSS System will carry data up to s.26, accordingly fixed and portable devices shall require appropriate encryption in accordance with JSP 440. DIA will be engaged during the development process and the Contractor shall provide a RMADS as a deliverable under the Contract.

33. The MSS shall comprise of a LAN and ISS (Corsham) shall act as an IT Accreditor, ensuring that, where the MSS uses RLI/SLI that it is compliant with JSP604 PS system.

34. The MSS LAN could operate independently, with mapping and imagery data being imported from physical media supplied by AIDU and DGC, with Notam data being manually imported/keyed in. This could represent an interim state or an initial phase in a phased project. The possible phases are outlined below and should be read in conjunction with and subject to the provisos referenced within the Contractor Delivery Stages at paragraphs 18 to 25 above. The final solution will be agreed between the Authority and the Contractor during PDR and Contractor Stage 2 CDR:

Phase 1: Stand alone MSS LAN with physical import of data from other media.

Phase 2: Phase 2 would require the MSS LAN to be compliant with JSP 604 (Network Joining Rules) for an IL5 s.26 System. A Code of Connection (CoCo) would be required to enable a connection of the MSS LAN to Defence Middleware.

Phase 3: Demonstration of the ability to import data from Defence Middleware (n.b. this may be achieved by a factory test involving the Middleware supplier in the manner detailed within paragraph 19 above).

Phase 4: The ability to receive live data feeds (e.g. Notam and Met data) via Middleware on SLI.

Test & Evaluation: PDR/CDR

35. Immediately following Contract award an initial meeting of safety, system, security and ITE working groups over a two day period would generate a common understanding prior to the Preliminary Design Review (PDR).

36. The core PDR and CDR Entry and Exit criteria are set out below:

Type of Review	Entry Criteria	Exit Criteria	Remarks
PDR	▪ CONEMP (MoD document) ▪ URD (MoD document) ▪ SRD (MoD document) ▪ Agreed agenda for PDR ▪ SRD compliance matrix ▪ Presentation slide pack (outline design) for PDR ▪ Initial meeting of the System WG informed by: – An initial technical specification including any requirements derived from the design process – Definition of boundaries of responsibility – Assumptions ▪ Initial meeting of the Safety WG informed by: – An initial hazard analysis – Derived safety requirements – Definition of boundaries of responsibility – Assumptions ▪ Initial meeting of the HMI WG informed by: – An initial HMI analysis ▪ Initial project risk analysis ▪ Specific plans (should be a development initial plans provided as part of MSS bid): – Safety – ITEA ▪ Initial Meeting of the Security & IT WG	Agreed Minutes Actions Log with defined owners Agreed SDR Agreed Technical Specification Agreement of means of design certification Agreed SMP Safety Analysis - Docs reviewed Agreed ITEAP Agreed Security Plan - IT solution	Acceptance criteria and milestone payments are as set out within the Contract.

Type of Review	Entry Criteria	Exit Criteria	Remarks
CDR	▪ Evidence actions from PDR discharged ▪ Deliverable Plans Finalised ▪ SMP ▪ ITEAP ▪ Sy Plan ▪ Agreed agenda for CDR ▪ Presentation slide pack for CDR	Agreed Minutes Actions Log Joint Agreement, incorporation of MOD comments & actions closed. Design Frozen Interface Control Doc Information Exchange Doc Code of Connection	Acceptance criteria and milestone payments are as set out within the Contract.

Test & Evaluation: MMS Storage Solution

37. The solution will require tablet stowage in the cockpit and the cabin and this may necessitate a Modification to the aircraft. Dependant on the ability of the aircraft DO to raise a modification for stowage in a suitable timescale the MSS Project manager and Project Engineer shall determine whether a Design Organisation modification process or a Service Modification process is most appropriate. If a modification is required the Contractor will provide support but will not carry out or be responsible for the modification.

Acceptance

38. Acceptance of Mission Support System (MSS)

a. Delivery of the MSS shall comprise of the Mission Planning System (MPS) and the Mission Management System (MMS).

b. The contract will deliver the MSS in two Stages as defined in paragraphs 18 to 25 of this document. The process of acceptance to be same for both Stages.

c. Combined MSS PDR / CDR minutes shall be agreed and critical actions closed at each Stage.

d. The MSS Safety Case shall be supplied by the Contractor in accordance with Annex B, and accepted by the Authority. It shall be updated at Stage 2.

e. The Contractor shall confirm in writing to the Authority that the support service at Item 3 of the Schedule of Requirements is in place.

39. Acceptance of Stage 1 (IOC) Mission Planning System (MPS)

a. The Contractor shall provide the MPS Map Preparation Tool release documents and demonstrate its standalone functionality to the Authority.

b. The Contractor shall provide MPS system test documentation to demonstrate compliance with the relevant standards referred to in this Statement of Requirement and in the Contract.

c. The Contractor shall supply and install one standalone MPS terminal and one MPS deployable terminals for the Stage 1 CDR which shall implement the IOC elements of the SRD at RAF Benson.

d. The Contractor shall provide an MPS briefing.

e. The Authority shall carry out a review of the Contract Stage 1 software functionality at RAF Benson. Software Functionality as defined in the SRDat Appendix 1 to Annex A. The Contractor shall provide a support solution to support the review period.

f. Post Stage 1 CDR design revisions shall be agreed between the Contractor and the Authority.

g. Subject to revisions being completed and documentation updated, the Contractor shall complete the supply and installation of MPS terminals and deployable terminals at RAF Benson in accordance with the table at paragraph 47.

h. The Contractor shall complete delivery of the training requirement (courses taken from initial training allowance as detailed within paragraph 73 of this Statement of Requirement).

i. The Authority shall confirm that standalone Stage 1 MPS has been accepted in full by the issue of a letter to the Contractor.

40. Acceptance of Stage 1 (IOC) Mission Management System (MMS)

a. The Contractor shall provide the MMS Moving Map and Planning Tool release documents and demonstrate its standalone functionality to the Authority.

b. The Contractor shall provide MMS system test documentation to demonstrate compliance with the relevant standards referred to in this Statement of Requirement and in the Contract.

c. The Contractor shall supply s.26 MMS In-Flight Devices for the Stage 1 CDR which shall implement the IOC elements of the SRD at RAF Benson.

d. The Contractor shall provide MMS briefing to support the CDR.

e. The Authority shall carry out a review of the Contractor Stage 1 MMS software functionality. Software Functionality as defined in the SRD at Appendix 1 to Annex A. The Contractor shall provide a support solution to support the review period.

f. Post Stage 1 CDR design revisions shall be agreed between the Contractor and the Authority.

g. Subject to revisions being completed and documentation updated, the Contractor shall complete the supply and installation of MMS In-Flight Devices at RAF Benson in accordance with the table at paragraph 47.

The Contractor shall complete delivery of the training requirement (courses taken from initial training allowance as detailed within paragraph 73 of this Statement of Requirement).

h. The Authority shall confirm that standalone Stage 1 MMS has been accepted in full by the issue of a letter to the Contractor.

41. Finalisation of IOC Design:

a. Submission of data to enable the Aircraft Document Set to be updated with proof of satisfactory verification in accordance with RA 4350.

b. Acceptance by the Authority of the Declaration of Design and Performance (DDP) and Certificate of Design (COD) deemed acceptable to the Authority subject to any agreed exceptions and limitations.

42. Acceptance of Stage 2 (FOC) Mission Planning System (MPS)

a. The Contractor shall provide the updated MPS Map Preparation Tool release documents and demonstrate its functionality and compatibility with Defence Middleware to the Authority.

b. The Contractor shall provide updated MPS system test documentation to demonstrate compliance with the relevant standards referred to in this Statement of Requirement and the Contract.

c. The Contractor shall supply and install s.26 MPS terminal and s.26 MPS deployable terminals for a Stage 2 CDR which shall implement the FOC elements of the SRD at RAF Benson. The Contractor shall use equipment from the Spares pool (as referred to in Part 4 of this Statement of Requirement) to ensure no impact to the operational equipment.

d. The Contractor shall provide an MPS briefing,

e. The Authority shall carry out a review of the Contractor Stage 2 software functionality at RAF Benson. The Contractor shall provide a support solution to support the review period.

f. Post Stage 2 CDR design revisions shall be agreed between the Contractor and the Authority.

g. Subject to revisions being completed and documentation updated, the Contractor shall complete the supply and installation of MPS network equipment and update the software on the MPS terminals and deployable terminals at RAF Benson in accordance with the table at paragraph 47.

h. The Contractor shall complete delivery of the training requirement (courses taken from initial training allowance as detailed within paragraph 73 of this Statement of Requirement).

i. The Authority shall confirm that the Stage 2 MPS has been accepted in full by the issue of a letter to the Contractor.

43. Acceptance of Stage 2 (FOC) Mission Management System (MMS)

a. The Contractor shall provide the MMS Moving Map and Planning Tool release documents and demonstrate its functionality to the Authority.

b. The Contractor shall provide MMS system test documentation to demonstrate compliance with the relevant standards referred to in this Statement of Requirement and the Contract.

c. The Contractor shall supply s.26 MMS In-Flight Devices for the Stage 2 CDR which shall implement the FOC elements of the SRD at RAF Benson. The Contractor shall use equipment from Spares pool (as referred to in Part 4 of this Statement of Requirement) to ensure no impact to the operational equipment.

d. The Contractor shall provide MMS briefing to support the CDR.

e. The Authority shall carry out a review of the Contractor Stage 2 MMS software functionality. The Contractor shall provide a support solution to support the review period.

f. Post Stage 2 CDR design revisions shall be agreed between the Contractor and the Authority.

g. Subject to revisions being completed and documentation updated, the Contractor shall complete the supply and installation of MMS In-Flight Devices at RAF Benson in accordance with the table at paragraph 47.

j. The Contractor shall complete delivery of the training requirement (courses taken from initial training allowance as detailed within paragraph 73 of this Statement of Requirement).

h. The Authority shall confirm that the Stage 2 MMS has been accepted in full by the issue of a letter to the Contractor.

44. Finalisation of FOC Design:

a. Submission of data to enable the Aircraft Document Set to be updated with proof of satisfactory verification in accordance with RA 4350.

b. Acceptance by the Authority of the Declaration of Design and Performance (DDP) and Certificate of Design (COD) deemed acceptable to the Authority subject to any agreed exceptions and limitations.

Deliverable Equipment

45. The Contractor shall be responsible for the identification and supply of the repairable and non-repairable equipment to meet the identified capabilities. Supply quantities shall be as detailed below:

46. Subject to the terms and conditions of the Contract, the Contractor shall ensure that Contractor Stage 1 Deliverables are provided by the MSS In-Service date (ISD) of 30 November 2015. Assets required for the CDR activities shall be delivered as agreed with the Authority, ensuring that the MSS ISD is not impacted. Item 3 of the Schedule of Requirements shall be fully operational by the MSS In-Service date of 30 November 2015 in connection with Stage 1 Deliverables.

47. Further to DEFCON 117, to ensure that identifying, tracking and managing items through the Joint Support Chain (JSC) is achievable, the Contractor shall ensure that articles shall be issued with a unique NATO stock number (NSN). The Contractor shall manage the codification process for articles that do not already have a NSN. The Contractor shall ensure that articles are codified by delivery (as detailed within paragraphs 18 to 25 above). The Contractor shall provide details of any articles to be supplied which have already been allocated a NATO stock number.

	MPS to Terminals to be installed at Main Operating Base (MOB) RAF Benson	MPS Deployable[1] Terminals to be delivered to Main Operating Base (MOB) RAF Benson	MMS in-flight devices
Stage 1 CDR	s.26	s.26	s.26
Contractor Stage 1 (IOC Functionality)	s.26	s.26	s.26
Stage 2 CDR	s.26	s.26	s.26
Contractor Stage 2 (FOC Functionality)	s.26	s.26	s.26
Total	s.26	s.26	s.26

Simulator

48. The Contractor shall provide to the Authority sufficient data, information and equipment to enable the Puma HC Mk2 Simulator to be updated to replicate the aircraft/MSS interaction.

[1] Deployable planning terminals may be used at MOB when not deployed.

PART 3 – PROVISION OF TECHNICAL SUPPORT TO PUMA HC2 MISSION SUPPORT SYSTEM

Technical Support Overview

49. The Contractor shall deliver the technical support services described below from Contract Award until 31 March 2020 or, if the Authority exercises its option to extend the Contract, until the Out of Service date of the platform, which is 31 March 2025.

50. The Contractor shall manage the design and configuration of the MSS and, where it is reasonable to do so the Contractor shall contribute to maintaining documentation and Configuration at the Platform level by working co-operatively with the Puma HC 2 Design Organisation, Airbus Helicopters Ltd.

Technical Advice and On Site Technical Support (including Mission Planning System Hardware Support)

51. The Contractor shall provide a service to allow the Authority's Representative to request Technical Advice and On Site support at the MOB (RAF Benson) during normal working hours. Normal working hrs are categorised as 0800 to 1700 hrs, Monday to Friday, excluding English Public Holidays.

52. Technical advice and on site support shall include:

a. A helpdesk facility that includes incident logging, tracking and resolution. This data shall be available to support relevant Key Performance Indicators in the Contract.

b. Providing technical advice and support to the Authority in troubleshooting faults/defects in the MSS including agreement of concessions. The Contractor shall be prepared to provide this advice/support either over the telephone or by attendance at MOB as necessary to satisfactorily resolve the query. The Contractor shall provide a satisfactory resolution within the following timescales:

   i) for requests received before 1200hrs – by no later than 1700hrs the same day; or

   ii) for requests received after 1200hrs – by no later than 1200hrs the following working day

c. Assistance in system recovery and data restorations.

d. Support for installations, upgrades and commissioning.

e. Subject to the terms and conditions of the Contract (and in accordance with the Contractor's Managed Spares and Repairs Service at Part 4 of this Statement of Requirement), repair and / or replacement of defective:

   i) Mission Support System equipment (supplied by the MSS Contractor) at the Main Operating Base within 2 working days notification.
   ii) Deployable Mission Support System equipment IT hardware (supplied by the MSS Contractor) at the in Main Operating Base within 2 working days notification.

iii) The Contractor shall also be responsible for the management and co-ordination of Mission Support System equipment repairs.

f. The Contractor shall instigate corrective actions to address repeatedly problematic and shortfall items.

g. Liaison with and between the Authority and the Platform Contractor (Airbus Helicopters UK Ltd) as required.

53. The scope of the hardware to be supplied and supported by the Contractor shall include the following:

a. Desktop PC's[2];

b. Deployable Laptop PC's[3];

c. Tablet PC's,

d. MSS spares,

e. PCMCIA cards for the aircraft Flight Management System (if required by the solution);

f. Printers;

g. The provision of Printer Toner Cartridges and paper shall be excluded from the scope of hardware support and shall be the responsibility of RAF Benson.

54. The Contractor shall be responsible for the specification, procurement and management of the hardware. The hardware shall be supplied by the Contractor but shall become the property of the Authority upon satisfactory completion of delivery. Management of Spares and Repairs is covered in Part 4 of this SOR.

24 Hour Technical Support

55. The Contractor shall provide a service for 5 days of each contractual year (commencing 01 Apr annually) to provide technical support for 24 hours a day for 5 days of the year to support key operations and training. Technical support shall consist of provision of telephone advice. This service could consist of 5 separate days per year or blocks of 2 or more days. The Authority shall provide 5 working days notice to activate this service.

Configuration Management

56. The Contractor shall provide a design configuration management service in accordance with Def-Stan 05-57.

57. The activities shall consist of:

a. Retention of all design drawings;

[2] If PCMCIA cards are required to support the aircraft Flight Management System, the MPS PCs must be capable of writing to PCMCIA cards

[3] If PCMCIA cards are required to support the aircraft Flight Management System, the MPS PCs must be capable of writing to PCMCIA cards.

b. The Contractor Delivering a Configuration Management Plan and in accordance with RA5301 and controlling the design in accordance with the agreed plan;

c. The Contractor shall maintain the MSS software and hardware configuration in accordance with their current Configuration Control Plan (CCP);

d. Proposing updates to the SRD to ensure that its currency is maintained through life.

Equipment Obsolescence Management

58. The Contractor shall provide an obsolescence management service that delivers:

a. Technical refreshes and

b. An equipment obsolescence management plan, including:

i) the technical refresh strategy (and any resulting impact on Aircraft System);
ii) identify likely point(s) where hardware refresh will be required; and
iii) an equipment disposal plan

Software Management and Modification

59. The Contractor shall provide a software management and modification service that delivers:

a. Software configuration management including modifications/uploads meeting the requirements of Def-Stan 05-57 Issue 5 Para 5. This shall include anti-virus and Operating System/Application patching against internal and external cyber threats in accordance with 2010DIN02-001;

b. Correction of errors and/or inaccurate data transfers by updates to software;

c. The Contractor shall update the MSS software once every six months (to include a core annual software update). The Contractor shall respond to software update requests and shall make changes to the software to change the way items are displayed on screen, add buttons, menu options etc to enable the functionality of the MSS to be edited as required by the user. This shall be separate from the correction of errors or anti-virus and Operating System/Application patching;

d. Obsolescence management, including software environment (i.e. software compilers, test environment), to ensure the ability to maintain and modify software and complex electronic hardware through-life;

e. The management of interfaces between the Contractor and the Authority;

f. Where modification activities affect software or complex electronic hardware, the contractor shall provide the software modification certification evidence for the DAL A, B and C Systems affected;

g. The Contractor shall support the production of the Risk Management and Accreditation Document Set (RMADS) for the MSS.

h. The Contractor shall support the Authority in achieving Security Accreditation with DSAS in accordance with Defence Manual of Security (JSP 440), HMG Security Policy Framework (SPF).

i. The hardware shall be capable of supporting programmes that are licensed by the Authority, which have not been supplied by the MSS Contractor. The Authority recognises this may have an impact on System performance and may incur additional costs.

Technical Advice and Investigation

60. The Contractor shall provide technical advice and recommendations relating to the support and operation of the Puma MSS as detailed below.

61. The Authority shall raise a F760 or F765 report seeking a Technical Response in respect of a Technical Advice or Investigation query. The Authority shall state the urgency when raising the report. The Contractor shall provide a Technical Response to the report within the following timescales:

a. Urgent and Operational Tasks – within 5 working days.

b. Routine Tasks – within 20 working days

62. The Contractor shall ensure that the technical advice and investigation service is compliant with MAA Regulatory Article (RA) 5404.

63. The Contractor shall ensure the F760 fault investigation service is compliant with RA 4307.

Safety Management Advice

64. The Contractor shall provide the following services in support of the Authority safety management system:

a. Contribute towards the Authority Platform Safety Case by providing support or information to maintain the Authority's Hazard Log and Loss Model;

b. When tasked under the technical investigation service, the Contractor shall analyse the safety and risk aspects of components which are the subject of F760 fault reports and provide safety advice in the F761 investigation report;

c. As a result of configuration management change or in-service feedback generate, or update existing, hazard analysis reports.

Technical Publications Maintenance and Amendment

65. The Contractor shall provide a technical publications maintenance and amendment service covering all operating, engineering and supply activities undertaken in support of the Puma HC2 MSS as detailed below.

66. The Contractor shall provide the following Technical Publications for the MSS to the Authority no later than 3 months after contract award:

a. User Manuals;

b. Administrator Manual;

c. MSS Interface Control Document (if requested by the Authority); and

d. MSS Information Exchange Document (if requested by the Authority).

67. The Contractor shall ensure the User Manuals contain suitable guidance for all MSS functions, the logic of how the MSS is designed to operate and fault diagnosis/troubleshooting guidance. They shall be written in plain English, user friendly, accessible to all Users and contain suitable guidance for all MSS function.

68. The publication service shall:

a. Ensure the layout and format of all Technical Publications shall be iaw MAA Regulatory Article 4350 and all documentation shall be verified iaw RA4350;

b. Provide updates to all Technical Publications every 6 months to align with paragraph 59c;

c. Provide additional updates to Technical Publications where the designer safety case requires mitigation to safety risk in the form of publications;

d. Ensure master source material (including all graphics) is maintained throughout the life of the aircraft;

e. Ensure master source material is available "on demand" to the Authority;

f. Ensure publication deficiencies highlighted by the Authority using F765 procedures are investigated by the Contractor and ensure that confirmed publication deficiencies identified by F765 procedures are incorporated in the Technical Publications in the annual update;

g. Provide urgent updates to Technical Publications should a deficiency affecting safety/airworthiness be discovered;

69. The Contractor shall provide technical representation at the annual ADS working group meetings between the Design Organisation and the Authority.

70. The Contractor shall provide advice on urgent technical instructions.

71. The Contractor shall produce an Aircrew operating brief on the installation for use during the trials phase and prior to amendment of the Aircrew manual and flight reference cards.

72. During the trials phase, the Contractor shall be responsible for providing supporting documentation and any advice as necessary to Handling Squadron, based at Boscombe Down, to allow the production of the amendments to the platform Aircrew manual and flight reference cards.

Training

73. The Contractor shall provide initial training on the operation and function of the MSS to all 22 Puma HC2 aircrews at RAF Benson. Initial training (up to a maximum of 7 courses which can be split between Stage 1 (IOC) and Stage 2 (FOC) delivery) will be provided in accordance with the following programme:

Training Course	Number of People to be Trained	Maximum Course Capacity	Course Dates	Duration (Days)
Introduction of System	s.26	s.26	s.26	s.26

74. The Contractor shall provide initial training in accordance with the training syllabus agreed with the Authority. The syllabus shall be compliant with the Defence Systems Approach to Training Quality Standard (DSAT QS). The Contractor shall manage the training provision in accordance with the requirements of JSP 822, part 3 chapter 2 and JSP 822 part 4.

75. The Authority is likely to require further training to take account of changes in personnel and updates to the MSS. Such training is outside the scope of this part of the SOR and, when required, the Authority shall task the Contractor via the additional tasking.

76. The Contractor shall maintain training material to ensure alignment with aircraft design and any changes in the MSS.

Simulator

77. The Contractor shall provide to the Authority sufficient data, information and equipment to enable the Puma HC Mk2 Simulator to be updated to replicate the aircraft MSS until 31 March 2020 or, if the Authority exercises its option to extend the Contract, until 31 March 2025.

PART 4 – PROVISION OF MANAGED SPARES AND REPAIRS SERVICE TO PUMA HC2 MISSION MANAGEMENT SYSTEM

Equipment Support

78. The Contractor shall provide a Managed Spares and Repairs Service for the Puma HC2 Mission Support System from delivery (as defined within Part 2 of this Statement of Requirement) to 31 March 2020 under Item 3 of the Contract Schedule of Requirements. Should the Authority exercise its option to extend the Contract in accordance with its terms, the Contractor shall provide an ongoing Managed Spares and Repairs Service until platform OSD on 31 March 2025 under Item 4 of the Contract Schedule of Requirements.

79. The Managed Spares and Repairs Service will involve the Contractor managing the process for repair and replacement of stated items of defective or damaged hardware during the continuance of the Contract under Item 3 and, if applicable, Item 4 of the Schedule of Requirements.

80. In connection with management and operation of the Managed Spares and Repairs Service and to expedite repair / replacement of defective or damaged hardware, the Contractor will maintain a holding of Spares that it deems to be appropriate to the volume of equipment delivered as part of the initial System capability provision based on typical attrition rates applicable to the types of equipment and their intended use. Initial Spares will be established under Item 2 of the Schedule of Requirements.

81. To preserve System availability, the Contractor will routinely replace from Spares items which are returned by the Authority for repair or replacement whilst, in parallel, arranging for repair of returned items if appropriate. The detailed procedures applicable to the Managed Spares and Repairs Service and the reporting, investigation and rectification of faults and defects will be discussed and agreed during the project development phase.

82. Carriage of equipment to the LFP (RAF Benson) as part of the Contractor's replacement or return of equipment following repair is included as part of the Managed Spares and Repairs Service (using approved methods of transportation for encrypted equipment). However the Authority will assume responsibility (and cost) for the return of any equipment to the Contractor for assessment, repair and / or replacement in order to ensure timely and efficient turn-around of System repairs / replacements.

83. In order to meet government accounting regulations the Contractor will provide monthly updates to the Authority identifying any equipment movements between the Contractor and users including the status of any items returned as unserviceable and confirmation of the ongoing availability of Spares/Repairable items. Should unexpected or abnormal equipment attrition rates be observed, the Contractor will report these to the Authority in order that appropriate remedial actions can be discussed and initiated. The Authority shall co-operate fully with the Contractor in this regard and shall give due consideration to any recommendations by the Contractor.

84. To ensure that identifying, tracking and managing items through the Joint Support Chain (JSC) is achievable, the Contractor shall ensure that systems are issued with a unique NATO stock number (NSN) in accordance with the requirements of DEFCON 117. The Contractor shall manage the codification process for articles that do not already have a NSN. The Contractor shall ensure that articles are codified by the date of delivery (as referred to in Part 2 of this Statement of Requirement). The Contractor shall provide details of any articles to be supplied which have

already been allocated a NATO stock number.

85. It is envisaged that RAF Benson Ops Staff/Aircrew will locally manage the issue of tablets and deployable laptops and that they will be responsible for charging batteries and ensuring that tablets and laptops are connected to the MSS network periodically to ensure that the System is up to date. The detail of how these interfaces will operate will be agreed during the PDR/CDR process and unit instructions will be amended to reflect the agreed position.

PART 5 – CONTRACT MANAGEMENT AND GOVERNANCE

Project Management Plan (PMP)

86. The Contractor shall provide a Project Management Plan (PMP) which details how they will manage the project from contract award through to 31 March 2025 or, if the Authority exercises its option to extend the Contract, until the Out of Service Date (OSD) of 31 March 2025. The Contractor shall provide an initial Project Schedule and Transition Plan one month after contract award and the PMP 3 months after contract award (as detailed within the Annex B Schedule of Deliverables). The PMP shall describe how the Contractor shall manage the project and shall be presented in the following layout:

Section	Content
1	Purpose and Structure of Plan
2	Project Description
	2.1 Systems Requirement Document (SRD)
	2.2 Solution
	2.3 Other influencing factors
3	Stakeholder Management
	3.1 Stakeholders
	3.2 Responsibilities
	3.3 Managing interactions with the Design Organisation
4	Project Schedule
	4.1 Overview
	4.2 Elements of the Schedule
	4.3 Key Milestone Dates
	4.4 External Linkages
	4.5 Schedule Management
5	Project Strategy and Processes
	5.1 Overview
	5.2 Modification Service
	5.3 Project Management and Control
	5.4 Linkage with Other MoD Programmes
	5.5 Project Communications
	5.6 ILS Arrangements
	5.7 Government Furnished Assets
	5.8 Design Airworthiness Standards and Certification
	5.9 Design Incorporation
	5.10 Configuration Management
	5.11 Safety Management
	5.12 Environmental management
	5.13 Quality Management
	5.14 Risk Management
	5.15 First Installations
	5.16 Acceptance, Trials, Test and Evaluation and RTS
	5.17 Production Embodiment

5.18 Security Aspects and Accreditation
5.19 Document Management Plan

6 Through Life Management Plan
6.1 Transition Management
6.2 Obsolescence management
6.3 Publications and amendments
6.4 Software management
6.5 Fault reporting
6.6 Post Design Services
6.7 Training

Annex A: List of Abbreviations
Annex B: Project Organisation
Annex C: Stakeholder Map
Annex D: Communications Plan
Annex E: GFA Management Plan
Annex F: Security Accreditation Plan

87. Additional information shall be supplied by adding further section(s) and Annexes as appropriate.

Transition Plan

88. The PMP shall describe how Transition will be managed from Contract Award Date to delivery of final MSS and will explain how and when the elements of the MSS support service shall be developed and become available. The plan shall include a schedule which clearly show links and dependencies that are critical to the delivery of the MSS capability and the key milestones from contract award.

89. The Contractor shall conduct and submit a risk assessment concurrently with the PMP, which shall as a minimum identify those transition risks that will have a significant impact on the project, this is to include an assessment on project timelines and costs.

General

90. The Contractor shall provide monthly electronic reports to the Authority in an agreed format, detailing activities undertaken, plus events and issues from the previous month and planned activity for the following month.

Meetings

91. The Contractor shall provide a UK based venue (unless otherwise agreed with the Authority) and secretarial services to support a Project Review Meeting, further details are provided at Appendix B.

92. Secretarial services shall include but not be limited to; detail attendees, raise the agenda, note the proceedings, circulate the meeting minutes and provision of suitable refreshments.

93. The Contractor shall also attend Quarterly Platform CCB and LTC meetings as required.

Product/Service Development Meetings

94. Following Contract award it is proposed that in addition to PDR, CDR and other working groups described in this document, that initial meetings are conducted at RAF Benson to engage stakeholders and to inform workstreams that will assist the development of the Contractors User Manuals and RAF Benson Unit instructions.

95. These meetings will provide an opportunity to engage and involve stakeholders in the development of the MSS, within the terms of the MSS contract, i.e. it is not a vehicle to make significant changes to the capability offered by the MSS Contractor.

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